



ANALYSIS OF OPERATIONAL PROCEDURES OF URBAN INFORMAL ENTERPRISES AND ITS ENVIRONMENT IMPACTS IN IBADAN, NIGERIA

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ABSTRACT

The empirical information on operational characteristics of urban informal enterprises is presented in this paper. Using systematic sampling technique, a total number of three thousand, four hundred and forty four (3444) questionnaires were administered to the operators and residents around areas where informal enterprises are carried out. An interval of 2 was used to select operators of UIEs in shops sited on both sides of the streets and residential unit that falls within low medium and high residential quarters. The operational characteristics of UIEs, especially its capital outlay, reveal that a larger proportion (36.0%) started with low capital of around N50000. However, about 2% invested up to N1-1.2million as initial capital. The ownership structure as shown in the analysis reveals that majority are owned by individuals (84.1%) while some are jointly owned (6.2%). The opinion of residents on procedures involved in urban informal enterprises and its effect on socio cultural environment reveals that use of generators and heavy machine that generate high level of noise was strongly perceived to have impact on residents (RAI 3.73). The next perceived is use of strong harmful chemicals (RAI 3.71) and use of inflammable fuel during operation was also perceived strongly to cause negative impacts like fire hazard most especially when it is not properly handled. The paper concludes that operational procedures of UIEs should be monitored by appropriate agency at the grassroots to forestall any impending danger both on inhabitant and environment.

KEYWORDS: Urban Informal Enterprises, Environment, Operator, Economy

INTRODUCTION

Rapid increase in the rate of urbanization is a fundamental issue which has been associated with changes in pattern of social and economic behavior of the general populace particularly in developing country like the case of Nigeria. An important aspect of these changes is the pattern of distribution and consumption of essential commodity in the rapidly growing cosmopolitan city of Ibadan where there is proliferation of Urban Informal Enterprises in every segment of city landscape. Attempts on conceptual and theoretical underpinning of Urban Informal Enterprises have spawned a growing literature (Nwaka 2005, Okeke 2000 Ijaiya 2002, Menyah 2009, Onyechere 2011). Several authors and researchers have conceptualized the sector within the framework of small scale ventures, thus justifying criteria for its several definitions. One of the major criteria used in defining urban informal enterprises or small scale entrepreneurs as established by Omisakin (1999) is the initial capital outlay. Access to this initial capital is a major problem for informal entrepreneurs across the world. This is premised on inability of operators to access or approach banks for financial assistance coupled with lack of necessary collateral to secure financial backing. Consequently, majority of the operators source initial capital from personal savings particularly from previous employments while some obtain loan or start with a gift from parents, relatives or friends while some take loan from informal bankers ("Alajo" within the Yoruba Context). These sometimes limit the initial capital outlay that should be invested in this kind of business. Studies in Nigeria (Aluko, et al (1972),

Omisakin, (1999) Dada, (1995) and research evidences in Botswana, (Menyah, 2009), Calcutta, (Ramalet, 1983) Sudan, (Anad et al, 1985), Burkinafaso as provided by Chuta and Wilcox (1985) established that a majority (97%) of informal enterprises are set up in this fashion. This has limited its level of operation on a small scale and sole proprietorship. According to Menyah (2009) the widespread prevalence of sole proprietorship demonstrates the significance of self interest in such business undertaking. He established further that the aim of sole proprietorships is motivated by maximum profit making. Omisakin, (1999) remarked that the predominance of sole proprietorship among the operator could be partly due to the nature of the enterprises in the sector or probably due to the advantages of sole proprietorship while the small proportion in those jointly owned could be due to mutual distrust among sole proprietors at the level of business formation.

The relationship between man and the environment is a complex web of interaction with causal and consequential interrelationships (Adeboyejo and Faniran 1999). Hence, there is a strong interaction or interplay in the environment and operational procedures of several activities carried out by man most especially in cities. City environment most especially in developing countries like Nigeria are threatened by several problems which makes them less conducive for human living (Afon, 2005). Consequently, Abeboyejo and Faniran (1999) described Nigeria environment as "threatened" both as a result of uncontrolled or uncontrollable urban development and through operational procedures of different mans activities like mining, deforestation as a result of agriculture practices, industrialization, urbanization, road construction, economic activities both formal and informal among others. These pose a great consequence on both physical and socio-cultural environment of man.

Several of the operational and behavioral attributes of urban informal enterprises poses occupational threats to quite a number of operators and the socio cultural environment where the activities is being carried out. These impacts: operational procedures and behavioral attributes of operators on environment have not been given adequate attention it deserves (Abolade, 2012) compared to concerted effort given to environmental impacts of industrial operations. On the contrary, concerted efforts on its contribution to the economic growth of nations have been extensively dealt with by researchers (Ijaiya 2002 Onyebueke, 2000 Sethuraman, 1997).

Other scholars have focused on the concepts informal enterprises, distribution among neighborhoods, its role in poverty alleviation, its implication in land use planning among others (Adedibu, et al 2005; Onyebueke 2000; Okeke, 2000 Menyah 2009, Onyechere 2011). The need to pay urgent attention to this aspect of human activities that is proliferating most cities of developing nations and whose incessant spread as well as operational attributes constitutes a major threat to the environment is highly indispensable.

MATERIALS AND METHODS

Multistage method of sampling was employed for collection of primary information.

For questionnaire administration (i.e. operators and residents around the areas where informal enterprises are carried out) both stratified and systematic random sampling techniques were employed for the research. The existing spatial structure of Local Government Areas in the region was used. The inventory of localities or communities in each of the local government areas was compiled from National Population Commission. The localities within each of LGAs were further stratified into three residential densities: high, medium, and low. The residential densities: high, medium and low show variation in population density, socio-economic and environmental characteristics among other variables that describe the study area. This method of sampling is more appropriate and applicable for this particular study. Again, it

allows each unit of investigation equal chance of being chosen in a complete list or file of population (Blalock 1959, Singleton et al, 1989 and Afon, 2005).

Fifty percent (50%) of the localities in each LGA in Ibadan metropolitan region were selected while twelve and half percent (12.5%) of localities in other LGAs in the suburb were equally selected and adopted for the survey. The reason for this variation is consequent on the fact that more informal activities are concentrated in the metropolis or "Ibadan core" compared to suburban areas or 'Ibadan less city'. Again, it is justified because it is a good representation of the total localities in the metropolis and villages in the suburb. This selection further enhanced the objectivity of the questionnaire distribution within the selected areas.

For the purpose of this study , it is hypothesized that population size affects land use as well as distribution of informal enterprises (Cohen, 2004) Also hypothesized is a linear relationship between traffic volume and concentration of informal enterprise hence transport system and informal enterprises are intricately connected (Adedibu and Jelili 2005). That land use type and intensity affect concentration of urban informal enterprises (Ijaiya, 2004) and close link exist between proliferation of informal activities and urban economy. Consequent on these assumptions and for the purpose of the field survey especially within Ibadan metropolis, roads within localities where the traffic is concentrated, localities with highest population size, and residential quarters with highest intensity of land use were selected for the sample. While in the suburb, localities with major commercial center or market were selected for survey. This is based on the fact that not all localities have concentration of informal enterprises. It was also observed during the reconnaissance survey that some LGAs such as Egbeda, Ona Ara, Lagelu are predominantly agrarian communities.

To determine the sample size for survey, the population size of each local government for 2006 population census Figure were extracted from National Population Census (NPC) and adopted for sampling. Based on the variations in population size of the eleven LGAs and in view of the fact that population density in each residential density differs, 0.08% of the population size in each LGA was determined and employed. The, total number of three thousand, four hundred and forty four (3444) questionnaires representing one thousand, eight hundred and six (1806) questionnaires administered to the operators and one thousand, six hundred and thirty eight (1638) to residents around areas where informal enterprises are carried out were successfully completed and returned for analysis. For the categories of residents in residential densities selected, the questionnaire was distributed in ratio 3: 2: 1 for operators and residents in high, medium, and low residential densities respectively. This method is in line with the generally believed pattern of population distribution within residential areas as employed by Adeboyejo (2002).

Using systematic sampling technique, questionnaires were administered to operators of informal enterprises in shops sited on the both sides of the streets and residential units used for informal enterprises on both sides of the selected roads. In order to enhance the systematic distribution, the researcher adopted the use of constant distance (distance between two electric poles 50m) along different categories of roads selected as unit of measurement to capture the distribution pattern and variation of categories of urban informal enterprises within the selected areas. (This method was adapted from Adedibu and Jelili 2005). The major reason for choosing road for questionnaire administration was because most informal enterprises are concentrated on road axis. This will help to examine the widespread and underlying factors for locating informal enterprises along different road types, residential neighborhoods and Local Governments. The second set of questionnaire was administered using the same sampling technique for residents in various residential densities with special attention to houses that are not used for informal enterprises but that are close

to the vicinity where informal enterprises are practiced. This is purposive because it is believed that these categories of residence will provide information on environmental negativities of the sector without any bias. Systematic sampling technique was adopted for the three categories of residential quarters and operators of informal activities on road axis. An interval of 2 was used to select operators and residential unit in each quarter. This is considered appropriate because it will enhance maximum coverage of operators in the categories of road selected. This was done by selecting the first operator randomly and/or one resident in the first building selected randomly and subsequent units at interval of 3rd, 5th and 7th as the case may be were chosen from the complete list of the population in Ibadan region.

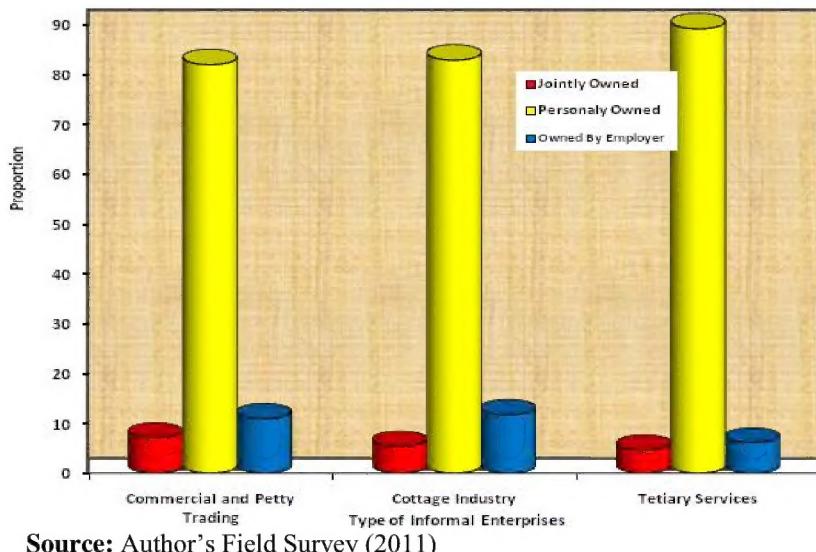
To examine resident's perception on the effects of informal enterprises on the environment, indices were developed. These are: Acceptability index (i.e. IIEA) to examine its level of agreement by residents as it affects the environment. This was measured through likhert scale range from Not agreed at all (1). Not Agreed (2). Somewhat Agreed (3). Agreed (4). Very much agreed (5). The average weight of such gave each index and this was subjected to Correlation analysis to examine the effects and relationship between urban informal enterprises and indices on perceived environmental effects. All these measurement showed a reflection of how residents perceived the effects of the subjects on the socio-cultural environment.

RESULTS AND DISCUSSIONS

Ownership Structure and Type of Informal Enterprises

Ownership of urban informal enterprises is diverse ranging from individual, joint ownership with family or friends and private organizations. Comparison between ownership structure and types of informal enterprises as illustrated in Figure 1 reveals that a vast majority of informal operators investigated were owned by individuals (84.1%). On the other hand, 6.2% of informal enterprises are jointly owned (sometimes owned by husband and wife). This is probably because it assists in earning additional income for the family for sustenance of livelihood. However, 9.7% are either managed by sales girl or relatives. There is no difference in the sole ownership structure within the three types of informal enterprises (commercial/petty trading (82.1%), cottage industry (83.0%) and tertiary service (89.3%) (i.e. majority of the three categories of urban informal enterprises are sole proprietorship). This finding is not unexpected since sole proprietorship is a unique characteristic of the enterprises. Again the total value of goods involved and required skill of operation or marketing is at abysmally low scale such that joint ownership is not required. Even when a sole proprietor receives loan or gift to start business as it is in most cases, the influence of borrower does not include nor imply ownership in any guise. Further analysis on business status of informal operator reveals that bulk of the operators indicated that they are managers (75.4%) while, 11.4% are employees, 11.1% are business partners and 2.1% are dealers. Furthermore, result of chi square analysis, with p value 0.000 shows a significant difference between business ownership, business status and type of informal activity as summarized in Table 1. The implication of this is that business ownership and business status influence type of urban informal enterprises in the area. Further analysis on ownership by gender was examined, to determine the pattern of ownership by different gender as well as which gender is prone to unemployment. The analysis reveals that 76.7% of female are engaged in petty/commercial trading compared to 41.8% of male who are involved. Just a little proportion of them (i.e. female) is involved in cottage industry and about 14.7% are involved in tertiary services. A critical examination of this convectional division can be best explained as lack or poor educational training and technical skill required operating in other sector. Consequently, this type of sector provides employment opportunities to the category of the concerned women. The dichotomy in gender participation support section of the literature which established that

women are more concentrated in areas of economic activity that are compatible with their productive roles especially those that are in extension of domestic labour and household production. (Whyte, 1991 and Menya 2009)

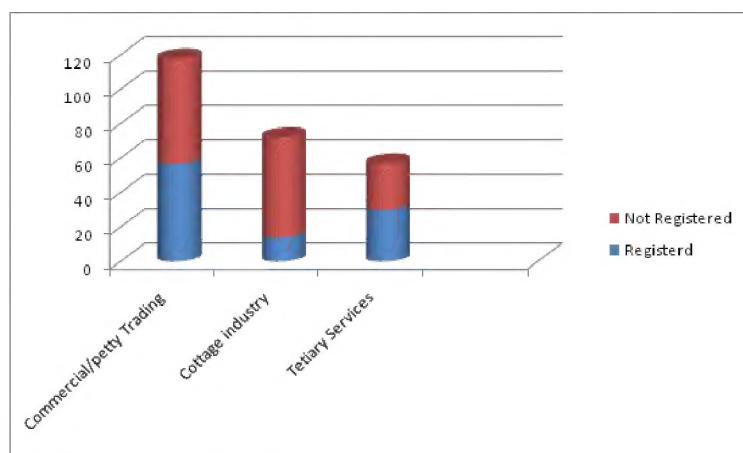


Source: Author's Field Survey (2011)

Figure 1: Business Ownership Type of Informal Enterprises

Registration Status of Business and Types of Informal Enterprises

A careful examination of the analysis on whether informal enterprises are registered as summarized in Figure 2 reveals that bulk (62.6%) of all the informal activities are not registered while 36.9% are registered. The profile on registration status of each category also revealed that a larger proportion (64.4%, 58.3% and 60.4%) of commercial /petty trading, cottage industry, and tertiary services respectively are not registered. Further analysis on whether permit was acquired before establishing the enterprises revealed that 60.1% of the enterprises did not acquire any permit while (29.8%) that claimed they acquired permit from various associations they belonged and very few got it from either Local government (6.1%) or State government (3.7%). This finding supports description of informal enterprises as given by Freudy (1999), Cross (1994) among others as unregistered, unregulated or casual activities. Further analysis using chi square shows there is a significant relationship (p value 0.000) between registration of business, acquisition of permit and type of informal enterprises as summarized in Table 1.

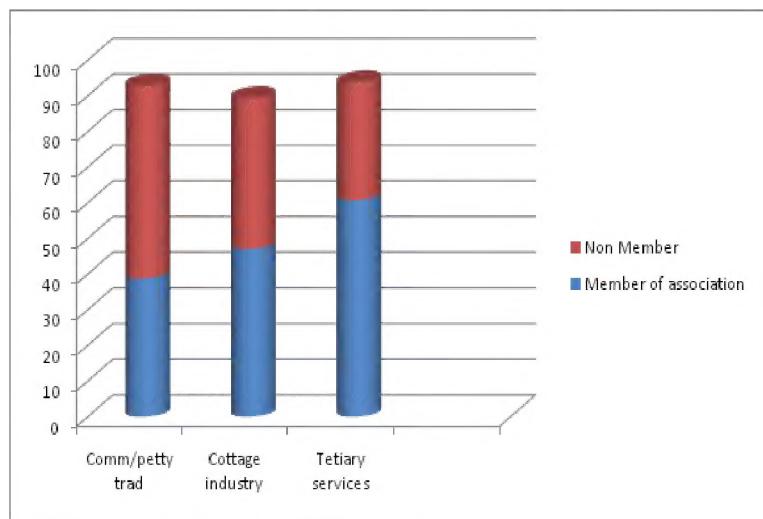


Source: Author's Field Survey (2011)

Figure 2: Registration of Business and Types of Informal Enterprises

Membership with Association and Type of Informal Enterprises

Analysis of findings on whether operator belongs to any association as shown in Figure 3 reveals a similar profile in the proportion of informal operators who are members of an association (45.9%) as against those who do not belong to any association (46.7%). It was however revealed that a larger proportion of commercial and petty informal operators (54.0%) did not belong to any Association probably because it does not require any procedures like acquisition of skill. This simplify its entry into the business compare to cottage industry (47.1%) and tertiary services (60.8%) that require apprentice training and compulsory registration of membership before they can fully practice. Analysis on whether informal enterprises pay entry fee or levy to organization reveals that bulk of the informal operators (66.2%) do not pay any fee compared to 33.8% who affirmed that they pay. Further analysis on body or organization that collects money reveals that a larger proportion (76.8%) of the respondents pays to the organization they belong to as association money (owo egbe) while 16.6 % of the respondents pay to some private body and 6.3% pay to government body like NAFDAC. A significant relationship (p value 0.000) exists between membership association and type of informal enterprises (see Table 1).



Source: Author's Field Survey (2011)

Figure 3: Relationship between Membership Association and Type of Informal Enterprises

Investment Pattern

The investment result of analysis on capital invested in informal enterprises reveals that a significant percentage (36.0%) of respondents started with the initial capital of less than ₦ 50,000.00 this is followed by 31.8 5% of those who started with initial sum of between ₦51000-100,000. These are generally low compared to capital needed to set up a business in formal business enterprises. However, a small proportion (0.6%) of informal sector operator in commercial /petty trading started with a high capital outlay as much as ₦1.1-2.0million. The same capital outlay was also recorded for 0.4% and 1.0% informal sector operator in cottage industry and tertiary services. This finding supports the findings of Omisakin, (1999) where he reported that the capital invested in small scale enterprises is generally low and it is also in line with the conceptual definition given by Freudy, (1999) to the effect that urban informal enterprises are activities with minimal capital input. Further analysis using Pearson chi square shows a significant relationship (p value is 0.000 in Table 1) between capital invested and categories of informal activities.

Table 1: Summary of Chi Square Analysis on Operational Characteristics of UIEs

Workers Employed	Computed Value (X^2)	Degree of Freedom	P - Value	Remark
Business Ownership/UIE	15.489	4	0.004	Significant
Reg Business/UIE	6.269	4	0.000	Significant
Capital/UIE	57.947	18	0.000	Significant
Memb Assc/UIE	75.166	4	0.000	Significant

Source: Author's Field Survey (2011)

Operational Characteristics of Urban Informal Enterprises

Result of analysis of the opinions of residents on operation and procedures involved in urban informal enterprises and its effects on the socio-cultural environments is summarized in Table 2. It is observed that the procedures involved in the operations of the subjects of investigation have detrimental effect on the socio-cultural environment. Using likert scale to rate the opinions of residents, it was observed that the use of generator and appliances that generate much noise was strongly perceived by residents (RAI 3.73) to be having impact on the socio-cultural environment. This is because it recorded high positive deviation about the mean. This is followed by opinion of residents for those who use harmful chemicals with offensive odours (RAI 3.71). This has significant effect on the socio-cultural environment when compared with the mean. The use of inflammable fuel like petrol, gas, kerosene also was perceived strongly to be the likely cause of fire hazards (RAI 3.6) especially when it is not properly handled or kept. Lots of dust raised by hawkers was slightly perceived by residents to have impacts on the environment. The variance is 0.028125 and standard deviation is 0.167705098.

Table 2: Operational Procedures of Urban Informal Enterprises and its Perceived Impacts on Environment

Operational /Procedures	VA	A	SA	NA	NAA	SWV	TOTAL	RAI	(X-\bar{X})	(X-\bar{X})²
	5	4	3	2	1					
Use of generator and appliances generates much noise	236	883	370	139	4	6100	1632	3.73	0.14	0.0196
Harmful Chemicals have offensive odour	257	803	409	147	11	6029	1627	3.71	0.12	0.0144
Use of inflammable fuel causes fire hazards	337	576	445	254	12	5844	1624	3.60	0.01	0.0001
Much dusts are raised by street hawkers	88	654	520	301	17	5235	1580	3.31	-0.28	0.0784
								14.35		0.1125

Source: Author's Field Survey (2011)

Calculation using Likert scale rating on Effect of Operational Procedure of Urban Informal Activities on Socio cultural Environment

RAI =Residents Agreement Index

SWV=Summation of Weighted Value

SR=Summation of Respondents

Σ (SWV/SR)=RAI

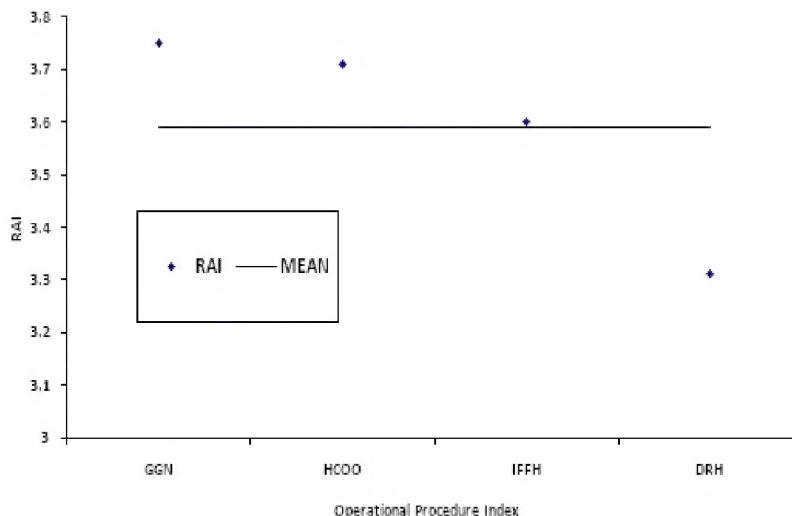
N=Total No of Variables

$$\text{Mean} = \sum \text{SWV}/N = \text{SWV}/4 = 14.35/4 = 3.5875$$

$$\text{Variance } (S^2) = \sum (x - \text{mean})^2 / N = \sum (x - \text{mean})^2 / 4 = 0.1125 / 4 = 0.028125$$

$$\text{Standard Variation} = \sqrt{\text{variance}} = 0.167705098$$

$$\text{Co-efficient of Variation} = \text{SD} \times 100\% / \text{mean} = 0.167705098 \times 100 / 3.58 = 16.77\%$$



GGN = Generator and Appliances Generates Noise HCOO = Harmful Chemicals have Offensive Odour
 IFFH = Inflammable fuel causes Fire hazards DRH = Dust raised by Hawkers

Figure 4: Scattered Diagram of Operational Procedure Index

CONCLUSIONS

The paper has provided empirical evidences on the peculiarity of operational methods on category of Urban Informal Enterprises and its impacts on the environment as perceived by residents. The use of generators and heavy machine that generate high level of noise was strongly perceived to have impact on environment. Consequently, the study recommends the following: machine that generate very low noise levels should be employed for operation, locations of UIEs that use gasoline fuel should be sited at approvable location and fire agencies should be functional to arrest any occurrence of fire hazards from such activities. Conclusively, activities of UIEs should be monitored by relevant Environmental Agencies at all tiers of Government. This will ensure proper control and use of heavy machine and other highly inflammable fuel and in consequence promote a safe and aesthetically pleasing environment.

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